

What is claimed is:

1. A conveyor system for conveying a wafer or other thin workpiece having a thickness of not more than 100 μm from its carrying location to another location, wherein

said conveyor system is provided with a plate-shaped member provided movably and swivelably and a moving and swiveling means moving and swiveling said plate-shaped member,

said plate-shaped member is provided together with a lifting means for uniformly lifting in its entirety a workpiece carried at said carrying location and a holding means for holding a workpiece lifted by said lifting means by uniformly chucking its entirety on a workpiece chucking surface of said plate-shaped member, and

a plurality of Verneuil nozzles serving as said lifting means are formed in the workpiece chucking surface near an outer periphery of said plate-shaped member along said outer periphery.

2. A conveyor system as set forth in claim 1, wherein said holding means is comprised of a plurality of vacuum chucking nozzles and wherein the plurality of Verneuil nozzles forming the lifting means and said plurality of vacuum chucking nozzles are alternately formed on the workpiece chucking surface near the outer periphery of said plate-shaped member along said outer periphery.

3. A conveyor system as set forth in claim 2, wherein a chucking pad of a vacuum chucking nozzle uses a porous member.

4. A conveyor system as set forth in claim 1, wherein said holding means is comprised of at least one electrostatic chucking plate and wherein said electrostatic chucking plate is provided at the workpiece chucking surface of said plate-shaped member.

5. A conveyor system as set forth in any one of

claims 1 to 4, wherein a controller for controlling drive timings of said lifting means and said holding means is provided.

6. A conveyor system as set forth in any one of claims 1 to 5, wherein a detachment prevention member for preventing part of the workpiece lifted by the plurality of Verneuil nozzles from being detached from said plate-shaped member is provided at the outer periphery of the plate-shaped member.

7. A conveyor system as set forth in claim 6, wherein said detachment prevention member is biased by an elastic member in a direction where its front end projects out from the workpiece chucking surface of the plate-shaped member.

8. A conveyor system as set forth in any one of claims 1 to 7, wherein provision is made of a switching station provided with a plurality of pressurized air blowing nozzles blowing pressurized air from below said workpiece so as to prevent said workpiece from dropping off when switching a workpiece lifted by said lifting means comprised of a plurality of Verneuil nozzles to holding by said holding means.

9. A conveyance method using a conveyor system as set forth in any of claims 1 to 8, including the steps of:

moving the plate-shaped member to a first position on which a workpiece is placed,

lowering the plate-shaped member down to the workpiece,

starting the blowing of air from the Verneuil nozzles,

chucking the workpiece by the Verneuil nozzles,

lifting up the plate-shaped member,
starting suction by vacuum chucking nozzles to chuck the workpiece by both of the vacuum chucking nozzles and Verneuil nozzles,

stopping the blowing of air from the Verneuil nozzles and chucking the workpiece by only the vacuum chucking nozzles, and

moving said plate-shaped member to a second position for processing of the next workpiece.